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Indian Standard

GLOSSARY OF TERMS FOR ADHESIVES AND
PRESSURE SENSITIVE ADHESIVE TAPES

(*First Revision*)

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Indian Standard

GLOSSARY OF TERMS FOR ADHESIVES AND PRESSURE SENSITIVE ADHESIVE TAPES

(*First Revision*)

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Indian Standard

GLOSSARY OF TERMS FOR ADHESIVES AND PRESSURE SENSITIVE ADHESIVE TAPES

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 15 March 1984, after the draft finalized by the Adhesives Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

0.2 This standard was first published in 1965. Keeping in view the latest experience in the manufacture and trade of adhesive and pressure-sensitive adhesive tapes, the Sectional committee decided to revise this standard.

0.3 In the present revision many new words have also been included and the old definitions have been modified with a view to align this revision with other international specifications. Assistance has been derived from the following standards:

AS No. Z.16-1961 Glossary of terms for pressure-sensitive adhesive tapes. Standards Association of Australia.

ASTM D 907-77 Standard definitions of terms relating to adhesives. American Society for Testing Materials.

BS 6138: 1981 Glossary of terms used in adhesives industry. British Standards Institution

0.4 Wherever 'T' is suffixed to a term in this glossary, it shall mean that its definition is applicable to tapes only.

0.5 Most of the adhesives are based on rubber or plastics and the terms used in these industries are covered in IS : 7503 (Part I)-1974*, IS : 7503 (Part II)-1976† and IS : 2828-1964‡. Only those terms having specific meaning *in* adhesives are covered in this glossary.

*Glossary of terms used in the rubber industry, Part I.

†Glossary of terms used in the rubber industry, Part II.

‡Glossary of terms used in the plastics industry.

1. SCOPE

1.1 This standard defines the terms commonly used in adhesive and pressure-sensitive adhesive tape industry.

2. TERMINOLOGY

Adhesive (of a Surface) — Rejecting adhesives or acting as a release agent.

Abrasion Resistance (T) — The ability of an adhesive tape to withstand rubbing and still function satisfactorily.

Adhere — To cause two surfaces to be held together by interfacial forces.

Adherend — A body which is held to another body by an adhesive (*see also* 'Substrate').

Adherend Failure — Rupture of an adhesive bond, such that the separation appears to be within the adherend.

Adhesion, Adhesives — The state in which two surfaces are held together by interfacial forces which may consist of valency forces or interlocking action or both.

Adhesion, Mechanical — Adhesion between surfaces due to interlocking of a solid adhesive with the asperities of the surfaces or subsequent solidification of a liquid adhesive absorbed by porous substrates.

Adhesion, Specific — Adhesion between surfaces due to intermolecular forces.

Adhesion, Strength — The minimum force required to cause failure of the adhesive bond.

Adhesion, Tapes — The bond produced by contact between a pressure-sensitive adhesive tape and a surface.

Adhesive — A substance capable of holding materials together by surface attachment.

Adhesive, Anaerobic — An adhesive which polymerizes spontaneously in the absence of oxygen, the polymerization being substantially inhibited by the presence of oxygen.

Adhesive, Assembly — An adhesive that can be used for bonding parts together, such as in the manufacture of a boat, aeroplane and furniture.

Adhesive, Aqueous — An adhesive in which the solvent or continuous phase in the case of an emulsion, is water.

Adhesive, Cellular — Same as 'Adhesive, Foaming'.

Adhesive, Cold-Setting — An adhesive which can set at ordinary ambient temperature or below.

Adhesive, Close Contact — An adhesive which is suitable only for thin layer application as in plywood and foil lamination and does not possess gap-filling properties.

Adhesive, Contact — An adhesive which develops strength immediately the joint is closed, no sustained pressure or setting time being required.

Adhesive, Film — An adhesive supplied in sheet, film or web form which usually sets by the application of heat alone or heat and pressure.

Adhesive, Film, Supported — An adhesive supplied in a sheet or in a film form with an incorporated carrier that remains in the bend when the adhesive is applied and used.

NOTE — The carrier may be woven or non-woven consisting of organic or inorganic fibre.

Adhesive, Film, Unsupported — An adhesive supplied in sheet, film or web without an incorporated carrier.

Adhesive, Foaming — An adhesive designed to foam *in situ* after application to provide gap-filling properties, also called 'cellular adhesive'.

Adhesive, Gap-Filling — An adhesive which will provide satisfactory bond strength in bond lines up to 1.3 mm in thickness.

Adhesive, Heat Activated — A dry coating of adhesive which is rendered tacky by the application of heat.

Adhesive, Hot Melt — An adhesive that is applied in a molten state and forms a bond on cooling to the solid state.

Adhesive, Hot Setting — An adhesive which sets at a temperature of 100°C or above.

Adhesive, Multiple Layer — A film adhesive, usually supported, with a different adhesive composition on each side; designed to bond dissimilar materials such as the core to face bond of a sandwich composite.

Adhesive, One Part — An adhesive which is used as such or may require the addition of water (also known as one component adhesive).

Adhesive, Pressure Sensitive — A permanently tacky adhesive which adheres to a surface at room temperature with the application of slight pressure for a brief period.

Adhesive, Separate Application — An adhesive consisting of two parts, each of different materials, one part being applied to one adherend and the second part to the other and the two brought together to form a joint.

Adhesive, Solvent — A solvent of weak solution of a polymer which dissolves the surfaces of the adherends, which are bonded when the solvent evaporates.

Adhesive, Solvent Activated (T) — A dry adhesive film that is rendered tacky just prior to use by application of a solvent.

Adhesive, Solvent Based — An adhesive having a volatile organic liquid as a vehicle.

Adhesive, Two Part — An adhesive in which two components are mixed immediately prior to application (also known as two-component adhesive).

Adhesive, Warm Setting — An adhesive which sets at a temperature above normal ambient temperature but below 100°C.

Adhesive Deposit (T) — Adhesive which is pulled away from the tape and remains on the surface to which the tape was applied.

Adhesive Failure — Rupture of an adhesive bond, such that the plane of separation appears to be at the adhesive adherend interface.

Adhesive Transfer (T) — The condition in which, on removal of the tape, the adhesive transfers from the tape backing either totally or partially to the underlayer or to any other surface.

Ageing (T)

Accelerated Ageing — The change in characteristics of a tape, either in strip or roll form, which occurs under conditions of elevated temperature and humidity. These conditions stimulate the principal effect of extended natural ageing.

Natural Ageing:

Application ageing — The change in characteristics of a tape which occurs after application to a surface when exposed to conditions normally encountered.

Roll ageing — The change in characteristics of a tape which occurs during storage in roll form.

Aggressive Tack — The property of certain adhesives, particularly non-vulcanizing rubber adhesives, to adhere on contact to themselves at a stage in the evaporation of volatile constituents even though they seem dry to the touch.

Assembly — A group of materials or parts, including adhesive, which has been placed together for bonding or has been bonded together.

Assembly Time — The time interval between the spreading of the adhesive on the adherend and the application of pressure or heat, or both, to the assembly.

NOTE — For assemblies involving multiple layers or parts, the assembly time begins with the spreading of the adhesive on the first adherend.

Open Assembly Time — It is the time interval between the spreading of the adhesive on the adherend and the completion of assembly of the parts for bonding.

Closed Assembly Time — It is the time interval between the completion of assembly of the parts for bonding and the application of pressure or heat, or both, to the assembly.

Backing (T) — The flexible supporting film, fabric, foil or paper to which a pressure-sensitive adhesive is applied.

Backsize (T) — A coating applied to the outside surface of the backing to facilitate unwinding or to protect the tape against weather, solvent, etc, or both (*see also* 'Release Coat').

Backsize Pick-Off (T) — Total or partial removal of backsize by the adhesive.

Binder — The component or combination of components of an adhesive composition (as opposed to the extender or filler) that is primarily responsible for the forces which hold the adherends together.

Blister — An elevation of the surface of an adherend. Its boundaries may be indefinitely outlined and it may have burst or have become flattened.

NOTE — A blister may be caused by insufficient adhesive; inadequate curing time temperature or pressure; trapped air, water, or solvent vapour.

Blocked Curing Agent — A curing agent or hardener rendered unreactive, which can be reactivated as desired by physical or chemical means.

Blocking (n) — An undesired adhesion between touching layers of a material, such as occurring under moderate pressure during storage or use.

Bond (n) — An attachment between adherends achieved by an adhesive.

Bond (v) — To attach adherends by an adhesive.

Bond Strength — The unit load applied in tension, compression, flexure, peel, impact, cleavage or shear, required to break an adhesive assembly with failure occurring in or near the plane of the bond.

Bursting Strength (T) — The ability of a tape to resist rupture when force is evenly applied perpendicularly to the surface of the tape in a standard apparatus.

Catalyst — A substance which markedly speeds up the cure of an adhesive when added in a small quantity as compared to the amounts of the primary reactants (*see also* Hardener).

Cleavage — A mode of application of a force to a joint between rigid adherends which is not uniform over the whole area but results in a stress at one edge.

Close Contact Adhesive — *See* 'Adhesive, Close Contact'.

Closed Assembly Time — *See* 'Assembly Time, Closed'.

Cobwebbing — A phenomenon observed during the spray application of an adhesive characterized by the formation of weblike threads along with the usual droplets as the adhesive leaves the nozzle of a spray gun.

Cohesion — The state in which the particles of a single substance are held together by primary or secondary valency forces. In the case of adhesives, it is the state in which the particles of the adhesive (or the adherends) are held together.

Cohesive Failure — Rupture of an adhesive bond, such that the separation appears to be within the adhesive.

Cold Flow — Creep at room temperature (*see also* 'Creep').

Cold Pressing — A bonding operation in which an assembly is subjected to pressure without the application of heat.

Cold Setting Adhesive — *See* 'Adhesive, Cold-Setting'.

Conformability (T) — The property of the tape which enables it to be shaped to irregular surfaces and curves.

Consistency — It is that property of a liquid adhesive by virtue of which it tends to resist deformation.

NOTE — Consistency is not a fundamental property but is a function of viscosity, plasticity and other such phenomena.

Contact Failure — Failure of an adhesive joint due to incomplete contact, during bonding, between adhesive and adherend or between adhesive surfaces.

NOTE — Incomplete contact may be due to insufficient flow or fusion of adhesive, non-uniform application of adhesive, poorly fitting adherends, etc.

Core (T) — The central tube on which the tape is wound.

Cottoning — A phenomenon observed during machine application of an adhesive characterized by the formation of weblike filaments of adhesive between machine parts and the receiving surface during transfer of the liquid adhesive (also called 'Hairy-Checky').

Creep (T) — The dimensional change of applied tape due to elastic recovery or a change of ambient conditions.

Crepe Taper (T) — A wrinkled tape backing, used particularly for its stretching properties.

Cupping (T) — A slightly U-shaped deformation of the tape (at right angles to the length) which usually appears after unwind tension is relaxed (see Fig. 1).

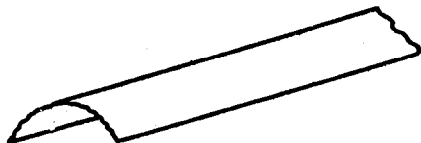


FIG. 1 CUPPING

Cure — To change the physical properties of an adhesive by chemical reaction, which may be condensation, polymerization or vulcanization; usually accomplished by the action of heat or chemical agent or a combination of the two, with or without pressure.

Curing Time — The time required for an adhesive to cure with or without the application of heat or pressure or both.

Curling (T) — The tendency of a tape to roll back on itself when removed from a roll and allowed to hang freely.

Dead Stretch (T) — The net stretched length after the tape has been elongated without breaking and allowed to recover.

Delamination

Applicable to Adhesives — The separation of layers in a laminate because of failure of the adhesive, either in the adhesive itself or at the interface between the adhesive and the adherend, or because of cohesive failure of the adherend.

Applicable to Tapes — The splitting of the adhesives to the backing upon removal from the roll so that the backing is sandwiched between the adhesive.

Doctor Bar (or Blade) — A scraper mechanism which regulates the amount of adhesive on the spreader roller or on the surface being coated.

Doctor Roll — In a roller mechanism, in which two rollers revolve at a different surface speeds or in opposite directions resulting in wiping action for regulating the adhesive, the one which regulates the supply to the spreader roll is known as Doctor Roll.

Dope — A material with adhesive properties usually used in a relatively thick section, that may be readily formed by application with a trowel or spatula.

Double Faced, Double Sided or Double Coated (T) — A backing with adhesive on both sides, usually having a disposable liner to prevent the adhesive sticking face to face.

Double Spread — Application of adhesive to both adherends of a joint.

Dry — To change the physical state of an adhesive on an adherend by the loss of solvent constituents by evaporation or absorption or both (*see also* 'Cure' and 'Set').

Drying Temperature — The temperature to which an adhesive on an adherend or in an assembly or the assembly itself is subjected to dry the adhesive.

Drying Time — The period during which an adhesive or an adherend or an assembly is allowed to dry with or without application of heat or pressure or both.

Dry Strength — The strength of an adhesive joint determined immediately after drying under specified conditions or after a period of conditioning in the standard laboratory atmosphere (*see* IS : 196-1966*).

Dry Tack — The condition of an adhesive in which the volatiles have evaporated or been absorbed sufficiently to leave it in a desired tacky state.

*Atmospheric conditions for testing (*revised*).

Edge Curl (T) — A lifting of an edge of an applied strip of tape.

Electrolytic Corrosion Factor (T) — A measure of the tape's corrosive effect on a copper conductor. This is particularly important in selection of tapes for use as electric insulation.

Extender — A substance, generally having some adhesive action, added to an adhesive to reduce the amount of the primary binder required per unit area.

Failure Adhesive — Rupture of an adhesive bond, such that the separation appears to be at the adhesive adherend interface.

NOTE — Sometimes termed failure in adhesion.

Faying Surface — The portion of a surface which is prepared for bonding to another surface; the portion of a surface bonded or joined to another surface.

Feathering — Same as 'Cottoning'.

Filament (T) — Continuous longitudinal threads laminated to a tape to increase its tensile strength.

Filler — A relatively nonadhesive substance added to an adhesive to improve its working properties, permanence, strength, or other qualities.

Filler Sheet — A sheet of deformable or resilient material, that when placed between the assembly to be bonded and the pressure applicator, or when distributed within a stack of assemblies, aids in providing uniform application of pressure over the area to be bonded.

Fillet — That portion of an adhesive which fills the corner or angle formed where two adherends are joined.

Filnic Tape (T) — Tape which has a flexible, non-fibrous and non-metallic backing.

Fish Eyes (T) — Small craters in the adhesive layer caused by small air bubbles entrapped between successive layers of tape in a roll.

Flake-Off (T) — Peeling or flaking of paint finishes from the tape backing during spraying or tape removal.

Flow — Movement of an adhesive during the bonding process before the adhesive is set.

Fluting (T) — Distortion of the outer or inner cylindrical contour of a roll of tape due to internal changes in the roll (*see* Fig. 2).

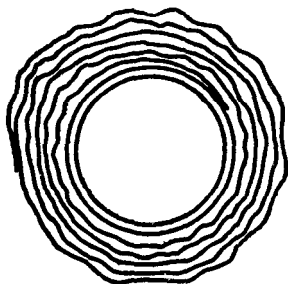


FIG. 2 FLUTING AND PEAKING

Foaming Adhesive — *See* 'Adhesive, Foaming'.

Gapping (T) — Openings between layers of tape within a roll.

Gel Time — The time measured from the moment the adhesive is ready for use to when the adhesive has sufficient consistency to resist flow under the conditions of the test.

Ghosting (T) — The image observed on the adhesive surface of printed tapes due to a physical impression or migration of one or more components from ink into the adhesive.

Gloss (T) — The measure of the reflectiveness of a tape backing, usually expressed by such terms as glossy, low gloss and dull.

Glue — Originally, a hard gelatine obtained from hides, tendons, cartilage bones, etc, of animals. Also, an adhesive prepared from this substance by heating with water. Through general use the term is now synonymous with the term 'adhesive'.

Glue Line — The layer of adhesive which attaches two adherends.

Green Strength — The strength of a bond determined immediately after assembly.

Gum — Any of a class of colloidal substances, exuded by or prepared from plants, sticky when moist, composed of complex carbohydrates and organic acids, which are soluble or swell in water.

NOTE — The term is sometimes used loosely to denote various materials that exhibit gummy characteristics under certain conditions, for example, gum balata, gum benzoin and gum asphaltum. Gums are sometimes included in the category of natural resins.

Hairy-Checky — See 'Cottoning'.

Hardener — A substance or mixture of substances added to an adhesive to promote or control the curing reaction by taking part in it. The term is also used to designate a substance added to control the degree of hardness of the cured film.

Holding Power (T) — The ability of a tape to withstand shear loading.

Inhibitor — A substance that slows down chemical reaction. Inhibitors are sometimes used in certain types of adhesives to prolong storage or working life.

Ink Offset (T) — The conditions observed in printed tapes in which the ink layer is totally or partially transferred from the backing to the adhesive layer.

Interliner (T) — The material which separates the layers of double face tapes when the tape is in roll form.

Joint — The location at which two adherends are held together with an adhesive.

Joint, Butt — A joint in which the plane of the bond is at right angles to a major axis of the adherends.

Joint, Close Contact — A joint in which the glue line is very thin — usually less than 0.1 mm.

Joint, Double Lap — The double lap joint consists of three adherend pieces assembled into a 'Y' shaped joint. The test pieces are arranged in the same plane with the longest dimensions parallel. The faying surfaces form the centre junction. The middle adherend has two equal faying surfaces each in juxtaposition with single faying surfaces of an outer adherend. The outer adherends are of equal thickness and of the same material. The joint is designed so that pairing stresses in the glue line are largely eliminated when the joint is loaded.

Joint, Edge — A butt joint formed by bonding two sheet adherends edge to edge.

Joint, Gap — A joint in which the bond line thickness is greater than 0.1 mm and less than 1.3 mm.

Joint, Lap — A joint made by placing one adherend partly over another and bonding together the overlapped portions.

Joint, Scarf — A joint in which the plane of the bond is at an acute angle to a major axis of the adherends, the adherends being coplanar.

Joint, Starved — A joint that has an insufficient amount of adhesive to produce a satisfactory bond.

NOTE — This condition may result from too thin a spread of adhesive to fill the gap between the adherends, excessive penetration of the adhesive into the adherend, too short an assembly time, or the use of excessive pressure.

Key Coat — A coating applied to a surface, prior to the application of an adhesive, to improve performance of the bond.

Laminate — A product made by bonding together two or more layers of material or materials.

Laminated Tape (T) — A tape construction which uses at least two different backing materials or a backing material and a reinforcing agent bonded together to form a composite backing.

Legging (T) — The formation of strings of adhesive at the point of separation of tape from an underlayer.

Liner (T) — A web or sheet affixed to the adhesive for protection during handling and storage. It is removed and discarded before application. Most frequently, it is found on double-faced tapes and label stocks.

Mastic — Same as 'Dope'.

Matrix — The part of an adhesive which surrounds or engulfs embedded filler or reinforcing particles and filaments.

Modifier — Any chemically inert ingredient added to an adhesive formulation that changes its properties.

Mucilage — An adhesive prepared from a gum and water. Also, in a more general sense, it is a liquid adhesive having a low order of bonding strength.

Off-Core (T) — The axial displacement of the core with respect to the complete roll of otherwise normal tape.

Offsetting (T) — The phenomenon in which the adhesive mass is transferred to the backing on unwinding the roll of the tape.

Oozing (T) — The exudation of adhesive at the sides of a roll of tape, resulting in sticky edges.

Open Time — The period during which the adhesive applied substrate is kept open, before pressing other substrate on it or before putting release paper (substrate) on it.

Paste — An adhesive composition having a characteristic plastic-type consistency, that is, a high order of yield value, such as the one prepared

by heating a mixture of starch and water and subsequently cooling the hydrolyzed product.

Peaking (T) — A particular case of fluting involving only one or two sharp unheavals in the outer layers of the roll (*see* Fig. 2).

Peel — A mode of application of a force to a joint in which one or both of the adherends must be flexible and in which the stress is concentrated at a boundary line.

Peel Adhesion (T) — The force required to peel a strip of tape from a standard test panel at a specified angle and speed.

Penetration — The entering of an adhesive into an adherend.

NOTE — This property of a system is measured by the depth of penetration of adhesive into the adherend.

Permanence — The resistance of an adhesive bond to deteriorating influences.

Pick-Up Roll — A spreading device in which the roll for picking up the adhesive runs in a reservoir of adhesive.

Pinking — The incomplete recovery of flexible adherends when compressed towards the adhesive layer. (Commonly used when describing bonded foam assemblies.)

Plasticity — A property of adhesives which allows the material to be deformed continuously and permanently without rupture upon the application of a force that exceeds the yield value.

Plasticizer — A material incorporated in an adhesive to increase its flexibility, workability, or distensibility. The addition of the plasticizer may cause a reduction in melt viscosity, lower the temperature of the second-order transition, or lower the elastic modulus of the solidified adhesive.

Pot Life — The period of time during which an adhesive, after mixing with catalyst, solvent, or other compounding ingredients, remains suitable for use.

Primer — Same as 'Key Coat'.

Puckering (T) — The uneven non-flat condition of masking paper to which tape has been applied.

Quick Stick (T) — That property of a pressure-sensitive tape which causes the tape to adhere to a surface instantly, without external pressure for a more thorough contact.

Release Coat (T) — A coating applied to a tape backing to facilitate the unwinding of the tape.

Release Paper — A sheet, serving as a protectant and/or carrier for an adhesive film or mass, which is easily removed from the film or mass prior to use.

Resin — A solid, semi-solid, or pseudo-solid organic material which has an indefinite and often high molecular mass, exhibits a tendency to flow when subjected to stress above ambient room temperature, usually has a softening or melting range and often fractures conchoidally.

NOTE — *Liquid Resin* — An organic polymeric liquid which, when converted to its final state for use, becomes a resin.

Resinification (T) — The hardening of a pressure sensitive adhesive to the point at which it loses all pressure sensitivity but retains a tenacious bond, thereby making tape removal either very difficult or impossible.

Retarder — Same as 'Inhibitor'.

Retrogradation — A change of starch pastes from low to high consistency on ageing.

Ridging (T) — A longitudinal ridge in the outer layers of a roll of tape (see Fig. 3).

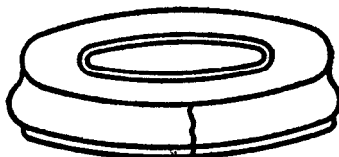


FIG. 3 RIDGING

Rippling (T) — Same as 'Fluting'.

Sandwich Panel — Assembly made of a light weight core to which sheet material has been bonded on both surfaces.

Saturant — A material with which backing may be impregnated to improve its properties.

Scarify — To make many small cuts or scratches in the surface of an adherend.

Scouring

A mechanical method of preparing adherends with an abrasive and a liquid.

In a Shoe Trade — Mechanical abrasion of a surface with abrasive paper or cloth.

Sealant — Caulking material, generally used in gaps wider than 1.3 mm which, when cured, has adhesive and elastic properties (*see* 'Dope').

Self Curing — The process of an adhesive undergoing vulcanization without the application of heat.

Self Vulcanizing — Same as 'Self Curing'.

Set — Converting an adhesive into a fixed or hardened state by chemical or physical action, such as condensation, polymerization, oxidation, vulcanization, gelation, hydration or evaporation of volatile constituents.

Setting Temperature — The temperature to which an adhesive or assembly is subjected to set the adhesive.

Setting Time — The time taken by an adhesive or assembly to set.

Shear — A mode of application of a force to a joint that acts in the plane of the bondline. The force may be applied in longitudinal compression or tension or torsion.

Shear Adhesion (T) — The force required to pull pressure-sensitive tape from any surface in a direction parallel to the surface to which it has been affixed. It is commonly measured in terms of the time required to pull a standard area of tape from a test panel under a standard load.

Single Spread — Application of an adhesive to only one adherend of a joint.

Slippage — The movement of adherends with respect to each other during the bonding process.

Solid Content — The percentage by mass of the non-volatile matter in an adhesive.

Spiralling (T) — The tendency of a tape to twist longitudinally when removed from the roll and allowed to hang freely (*see* Fig. 4).



FIG. 4 SPIRALLING

Spread — The quantity of adhesive per unit joint area applied to an adherend. It is expressed preferably in kilograms of liquid or solid adhesive per thousand square metres of joint area ($\text{kg}/1\,000\,\text{m}^2$).

Staining (T)

Resin Deposit Stain — A resin deposit causing discoloration that can be removed by a solvent which does not affect the base film surface.

Delayed Stain — A stain which is not apparent immediately after the removal of the tape, but which develops after exposure to light.

Permanent Stain — A surface discoloration which cannot be removed by a solvent.

Reverse Stain — A difference in surface colour caused by the tape protecting the surface over which it is applied.

Storage Life — The period of time during which a packaged adhesive can be stored under specified temperature conditions and remain suitable for use, also called 'Shelf Life'.

Strength

Dry — The strength of an adhesive joint determined immediately after drying under specified conditions or after a period of conditioning in the standard laboratory atmosphere.

Wet — The strength of an adhesive joint determined immediately after removal from a liquid in which it has been immersed under specified conditions of time, temperature, and pressure.

Stringiness — That property of an adhesive which results in the formation of filaments or threads when adhesive transfer surfaces are separated (*see also* 'Webbing').

NOTE — Transfer surfaces may be rolls, picker plates, stencils, etc.

Substrate — A material upon the surface of which an adhesive is spread for bonding or coating.

Surface Preparation — A physical and/or chemical preparation of an adherend to render it suitable for adhesive joining.

Syneresis — The exudation of small amounts of liquid by gels on standing.

Tack — That property of an adhesive which enables it to form a bond of measurable strength immediately after the adhesive and the adherend are brought into contact under low pressure.

Tackifier — An additive used to enhance the tack of an adhesive film, or to extend the tack range of an adhesive.

Tack Period — The period in which an adhesive remains in the tack-dry condition after application to an adherend under specified conditions of temperature and humidity.

Tear Resistance (T) — The ability of a tape to resist tearing after a tear has been started by cutting or nicking the edge.

Telescoping (T) — The axial displacement of tape layers relative to each other, resulting usually in a cone-shaped roll (*see* Fig. 5).

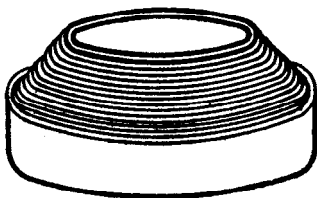


FIG. 5 TELESCOPING

Temperature, Drying — The temperature to which an adhesive on an adherend or an assembly or the assembly itself is subjected to dry the adhesive.

Thinner — A volatile liquid added to an adhesive to modify the consistency or other properties.

Thixotropy — A property of adhesive system to thin upon application of mechanical force and to thicken upon subsequent release of the applied force.

Throwing — A characteristic behaviour of some adhesives, occurring when they are transferred from rollers or rotary stencil mechanisms wherein, due to peripheral speed, small droplets of the adhesive are thrown from the roller or the stencil.

Time, Drying — The period of time during which an adhesive on an adherend or an assembly is allowed to dry with or without the application of heat or pressure or both.

Unwind Tension (T) — The bond resisting the force required to remove tape from the roll.

Warp — A significant variation from the original, true or plane surface.

Webbing — Filaments or threads that may be formed when adhesive transfer surfaces are separated (*see also* 'Stringiness').

NOTE — Transfer surfaces may be rolls, picker plates, stencils, etc.

Wet Strength — The strength of an adhesive joint determined immediately after removal from a liquid in which it has been immersed under specified conditions of time, temperature and pressure.

Yield Value — The stress (either normal or shear) at which a marked increase in deformation occurs without an increase in load.

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